B. Claims

The listing of all claims in the application is provided.

1. (Previously Presented) A method for manufacturing a liquid jet recording head which comprises an element substrate provided with a plurality of discharge energy generating elements for applying discharging energy to a recording liquid in accordance with image data, a liquid chamber for storing the recording liquid, and a top plate having a plurality of nozzles and which is formed by jointing the element substrate and the top plate so that each of the discharge energy generating elements faces the respective nozzle, the method comprising the steps of:

forming, in an anisotropic-etching mask layer provided on a nozzle surface of the top plate, a compensation pattern extending over a portion of the top plate that is subsequently etched away to form the liquid chamber for storing the recording liquid; and

over-etching the top plate by anisotropic etching using the compensation pattern as a mask to remove a part of the top plate masked by the compensation pattern prior to removing the compensation pattern to form the liquid chamber having a substantially rectangular shape at the nozzle surface of the top plate.

2. (Original) A method for manufacturing a liquid jet recording head according to claim 1, wherein the top plate comprises a silicon wafer having a <110> oriented surface.

3. (Previously Presented) A method for manufacturing a liquid jet recording head according to one of claims 1 and 2, wherein comb-shaped compensation patterns are formed and arranged to oppose each other so as to define a ladder-shaped opening region between the compensation patterns at the center portion of a part of the top plate that will be removed to form the liquid chamber.

4. (Previously Presented) A method for manufacturing a liquid jet recording head according to one of claims 1 and 2, wherein compensation patterns are formed and arranged to oppose each other so as to define a substantially H-shaped opening region between the compensation patterns at the center portion of a part of the top plate that will be removed to form the liquid chamber.

5. (Previously Presented) A method for manufacturing a liquid jet recording head according to one of claims 1 and 2, wherein the compensation pattern is designed by combining at least one line having an angle of 55° relative to a <111> plane in the nozzle direction of the silicon wafer and at least one line having an angle of 71° relative to the same <111> plane, and compensation patterns are formed and arranged to oppose each other separated by an opening region in the center portion of a part of the top plate that will be removed to form the liquid chamber.

6. (Previously Presented) A method for manufacturing a liquid jet recording head according to one of claims 1 and 2, wherein each of the compensation

pattern is designed by combining at least one line having an angle of 55° relative to a <111> plane in the nozzle direction of the silicon wafer, at least one line having an angle of 71° relative to the same <111> plane, and at least one line parallel to the nozzle arraying direction, and compensation patterns are formed and arranged to oppose each other separated by an opening region in the center portion of a part of the top plate that will be removed to form the liquid chamber.

7. (Previously Presented) A method for manufacturing a liquid jet recording head according to claim 1, further comprising the step of removing the compensation pattern after the liquid chamber is formed.